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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,484	10/29/2003	John M. Smith III	2250-13A	6978
4678	7590	10/10/2006	EXAMINER	
MACCORD MASON PLLC 300 N. GREENE STREET, SUITE 1600 P. O. BOX 2974 GREENSBORO, NC 27402			CAMERON, ERMA C	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/696,484	<b>Applicant(s)</b> SMITH ET AL.	
	<b>Examiner</b> Erma Cameron	<b>Art Unit</b> 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-42 is/are pending in the application.  
     4a) Of the above claim(s) 25-29, 35-39 and 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23, 24, 30-34, 40 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's arguments filed 11/25/2005 have been fully considered but they are not persuasive.

Previously, claims 23-24, 30-31, 33-34, 40 and 42 were examined.

Because AEM 5700 was canceled in claim 32 and  
“octadecylaminodimethyltrihydroxysilylpropyl ammonium chloride” inserted in its place, claim 32 has now been rejoined into the claims being examined.

Claims 23-24, 30-34, 40 and 42 are now being examined.

2. The amendment to the claims filed on 11/25/2005 does not comply with the requirements of 37 CFR 1.121(c) because

a) claims 25-26, 28-29, 35-36 and 38-39 should have been given the status identifier

“withdrawn”.

b) Claims 27, 37 and 41 should have been given the status identifier “withdrawn- currently amended”.

c) Amendments to paragraphs beginning at page 1, 4:7 and 9:15 should not be in quotation marks.

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d) The amendment to the paragraph at 14:lines 7-8 is not a complete paragraph (ends in a colon).

It appears that the complete paragraph is from 14:7 to 15:4. Thus, both amendments to page 14 should be part of ONE amendment that is to the paragraph starting at page 14, line 7 and ending at page 15, line 4.

Amendments to the claims filed on or after July 30, 2003 must comply with 37 CFR 1.121(c)

which states:

(c) *Claims*. Amendments to a claim must be made by rewriting the entire claim with all changes (*e.g.*, additions and deletions) as indicated in this subsection, except when the claim is being canceled. Each amendment document that includes a change to an existing claim, cancellation of an existing claim or addition of a new claim, must include a complete listing of all claims ever presented, including the text of all pending and withdrawn claims, in the application. The claim listing, including the text of the claims, in the amendment document will serve to replace all prior versions of the claims, in the application. In the claim listing, the status of every claim must be indicated after its claim number by using one of the following identifiers in a parenthetical expression: (Original), (Currently amended), (Canceled), (Withdrawn), (Previously presented), (New), and (Not entered).

(1) *Claim listing*. All of the claims presented in a claim listing shall be presented in ascending numerical order. Consecutive claims having the same status of “canceled” or “not entered” may be aggregated into one statement (*e.g.*, Claims 1–5 (canceled)). The claim listing shall commence on a separate sheet of the amendment document and the sheet(s) that contain the text of any part of the claims shall not contain any other part of the amendment.

(2) *When claim text with markings is required*. All claims being currently amended in an amendment paper shall be presented in the claim listing, indicate a status of “currently amended,” and be submitted with markings to indicate the changes that have been made relative to the immediate prior version of the claims. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be

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used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. Only claims having the status of “currently amended,” or “withdrawn” if also being amended, shall include markings. If a withdrawn claim is currently amended, its status in the claim listing may be identified as “withdrawn—currently amended.”

(3) *When claim text in clean version is required.* The text of all pending claims not being currently amended shall be presented in the claim listing in clean version, *i.e.*, without any markings in the presentation of text. The presentation of a clean version of any claim having the status of “original,” “withdrawn” or “previously presented” will constitute an assertion that it has not been changed relative to the immediate prior version, except to omit markings that may have been present in the immediate prior version of the claims of the status of “withdrawn” or “previously presented.” Any claim added by amendment must be indicated with the status of “new” and presented in clean version, *i.e.*, without any underlining.

(4) *When claim text shall not be presented; canceling a claim.*

(i) No claim text shall be presented for any claim in the claim listing with the status of “canceled” or “not entered.”

(ii) Cancellation of a claim shall be effected by an instruction to cancel a particular claim number. Identifying the status of a claim in the claim listing as “canceled” will constitute an instruction to cancel the claim.

(5) *Reinstatement of previously canceled claim.* A claim which was previously canceled may be reinstated only by adding the claim as a “new” claim with a new claim number.

Amendments to the specification are described in MPEP 714.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 23-24, 30-34, 40 and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification contains two contradictory ideas.

A) The first is that the finishing composition must contain a flame retardant. This is stated at:

a) 4:8 “The chemical treatment of the present invention comprises exposing the inherently FR textile material to an aqueous solution of a wetting agent and a flame retardant and one or more of: an antimicrobial agent, a water repellant agent, or a soil resistance agent...a flame retardant may be added to the chemical treatment composition to ensure that the inherent flame retardant remains chemical coupled with the polyester fiber.”

b) The difference between Examples 1 and 2: Example 1 contains flame retardant, and the treated fabric passes the flammability test; Example 2 lacks flame retardant, and fails the flammability test.

c) 9:15-19 “...the inherently flame resistance properties of AVORA fabric degrade after a post-weave chemical treatment. However, the present inventor has found if a flame retardant is added during the chemical treatment coating process, the fabric retains a flame resistance substantially similar to untreated inherently flame resistance fabric.”

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**B)** On the other hand there are statements indicating that a flame retardant is NOT needed in the claimed invention:

d) 3:4-5 “...wherein the finish imparts a property selected from the group consisting of: an antimicrobial agent, a soil repellent and a fluid repellent.” (no mention of flame retardant)

e) Examples 3, 4, 6 and 9 lack flame retardant, and yet pass the flammability test.

f) 13:13-16 “But, it is not a requirement for the present invention to require the addition of flame retardant to the desired chemical treatment in order for the treated fabric to have an equal flame resistance to the untreated inherently FR fibers.”

These two ideas contradict each other, and make the specification confusing.

*The response of the applicant in the 11/25/2005 amendment that whether or not FR material is required depends on the FR test to be passed and the construction of the fabric was not present in the application as originally filed. The examiner's opinion is that the specification is confusing on the issue of whether FR material is needed, and that an explanation that offers information that was not originally in the specification is not sufficient to make the issue less confusing. In addition, as explained in paragraph 5 below, applicant's efforts to amend the*

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*specification to reflect the fact that FR material may not be needed (paragraph at 4:7 and at 9:15) is new matter.*

5. The amendment filed 11/25/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

a) The addition of “some embodiments of” to the paragraph at 4:7 is new matter that was not in the specification as originally filed. The original statement stated uncategorically that “...the chemical treatment...comprises exposing the inherently FR textile material to...a flame retardant...”

b) 9:15 – “...In certain cases the flame retardant is not required to be added to the chemical treatment” is new matter that was not in the specification as originally filed. The addition of this statement completely changes the meaning of this paragraph and the specification as a whole.

Applicant is required to cancel the new matter in the reply to this Office Action.



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6. Claims 23-24, 30-34, 40 and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Table 1 is not adequately defined. The meaning of the descriptors in “warp yarn” and “fill yarn” are not defined. Osy is not defined.

*The applicant has not addressed these issues in the 11/25/2005 amendment, despite a statement that “Table I has been amended to clarify the terminology...”. The amendment to Table I only added TM to “Avara FR”, and in no way clarified the terminology. The Avara web page, that applicant has attached, adds no clarification either.*

*The applicant is requested to address this rejection.*

7. The rejection of Claims 23-24, 30-31, 33-34 and 40 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of finishing an inherently flame retardant polyester fabric, does not reasonably provide enablement for any inherently flame retardant fabric, is withdrawn because of the amendment filed 11/25/2005.

8. Claims 23-24, 30-34, 40 and 42 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of treating fabric with a composition that contains flame retardant, as well another agent selected from antimicrobial, fluid or soil repellant, does not reasonably provide enablement for a composition that does not contain flame retardant. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

It appears, at least from the statements in 4A) above, that flame retardant is required in the composition of the claimed invention.

***The applicant has not addressed this issue in the 11/25/2005 amendment.***

9. Claims 23-24, 30-34, 40 and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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- a) The addition of “AVORA FR(Kosa) polyester...being inherently flame retardant” to page 2, lines 9-18 is new matter that was not supported in the specification as originally filed. Nor has the applicant shown any other support of this statement.
- b) The addition to claims 40 and 41 of “polyester incorporating organic phosphorous compounds” is new matter that is not supported in the claims or specification as originally filed.
- c) The addition to 5:27 of “...which is a water based dispersion of fluorinated acrylic co-polymer” is new matter that was not supported in the specification as originally filed.
- d) The addition to claim 37 of “a water based dispersion of fluorinated acrylic co-polymer” is new matter that was not supported in the specification as originally filed.

10. The amendment filed 11/25/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

- i) The addition of “AVORA FR(Kosa) polyester...being inherently flame retardant” to page 2, lines 9-18 is new matter that was not supported in the specification as originally filed. Nor has the applicant shown any other support of this statement.

ii) The addition to 5:27 of "...which is a water based dispersion of fluorinated acrylic co-polymer" is new matter that was not supported in the specification as originally filed.

Applicant is required to cancel the new matter in the reply to this Office Action.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 23-24, 30-34, 40 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 42: there is no requirement that flame retardant be present in the composition, contrary to 4A) above. Flame retardant is only one of four agents that may be added.

***This was not addressed in the 11/25/2005 amendment.***

b) Claim 42: it is not clear why fluid repellant and soil repellant (which are fluorochemicals [6:2]) are among the four agents that may be added, while line 4 of claim 42 requires a fluorochemical in the composition.

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*This was not adequately addressed in the 11/25/2005 amendment by applicant's statement that "FR manufacturers [teach] that fluorochemicals are to be avoided". Why two agents that are fluorochemicals are claimed IN ADDITION TO FLUOROCHEMICAL IN GENERAL has not been addressed.*

### ***Drawings***

13. The applicant has canceled the Brief Description of the Drawings (3:7-15), but has not canceled the drawings themselves. The examiner also notes that the drawings were not part of parent application 09/965485.

### ***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. The rejection of Claim 42 under 35 U.S.C. 102(b) as being clearly anticipated by Ferziger et al (4526830) is withdrawn because of the amendment filed 11/25/2005.

16. The rejection of Claims 42, 24 and 30-31 under 35 U.S.C. 102(b) as being clearly anticipated by Porter et al (4690859) is withdrawn because of the amendment filed 11/25/2005.

17. Claims 42, 23 and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 07-157977.

'977 teaches applying by immersion or other methods a fluoropolymer waterproofing to a fire-resistant polyester (Trevira CS) (see Abstracts and [004], [0007], [0013] of translation), thus meeting the limitations of claims 40 and 42. Immersion would inherently saturate the polyester Trevira cloth. As a fire-resistant polyester, Trevira CS would inherently pass the NFPA 701 test.

18. Claims 42, 23 and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by EP 503114.

'114 teaches applying a fluorocarbon like Scotchguard to Trevira CS to give the Trevira oil-, soil-, and water-repellency (see Abstracts, in particular the WPIX Abstract). As a fire-resistant polyester, Trevira CS would inherently pass the NFPA 701 test.

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. The rejection of Claims 23-24 and 33-34 under 35 U.S.C. 103(a) as being unpatentable over Ferziger et al (4526830) is withdrawn because of the amendment filed 11/25/2005.

21. The rejection of Claims 30-31 under 35 U.S.C. 103(a) as being unpatentable over Ferziger et al (4526830) taken in view of White et al or Blehm et al (4842766) is withdrawn because of the amendment filed 11/25/2005.

22. The rejection of Claims 23 and 33-34 under 35 U.S.C. 103(a) as being unpatentable over Porter et al (4690859) is withdrawn because of the amendment filed 11/25/2005.

23. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-157977.  
'977 is applied here for the reasons given above.

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'977 does not teach that the fluoropolymer is applied by padding, but it would have been obvious to one of ordinary skill in the art to have used a conventional application method such as padding in the '977 process.

24. Claims 30-31 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-17977 taken in view of White et al (A Comparison of Antimicrobials for the Textile Industry, 2000).

'977 is applied here for the reasons given above.

'977 does not teach the use an antimicrobial such as an organosilane.

White teaches that a molecularly bound organosilane is used as an antimicrobial in the textile industry (p 2).

It would have been obvious to one of ordinary skill in the art to have used the antimicrobial organosilanes of White in the treatment composition of '977 because of the need for an antimicrobial on a fabric exposed to the weather and wetness as the tarpaulin fabric of '977 is.

White does not teach the % of antimicrobial to add, but it would have been obvious to one of ordinary skill in the art to have optimized the level of antimicrobial through no more than routine experimentation as concentration is known to be an important factor to control in achieving efficacy of an antimicrobial.



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25. Claims 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-157977 taken in view of Blehm et al (4842766).

‘977 is applied here for the reasons given above.

‘977 does not teach the using an antimicrobial such as an organosilane like the silane of claim 32.

‘766 teaches that a silane such as 3-(trimethoxysilyl)-propyldimethyloctadecyl ammonium chloride may be used as an antimicrobial on polyester fabric at 0 to 5 weight % (see Example 5). Silanes are known as coupling agents, because they covalently bind to other substances. ‘766 reports that the silane is durably bound to the substrate it is applied to (8:3-8).

The application concentration overlaps with applicant’s claimed concentration.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. See *In re Malagari* 182 USPQ 549.

It would have been obvious to one of ordinary skill in the art to have used the antimicrobial silane of ‘766 in the treatment composition of ‘977 because of the need for an antimicrobial on a fabric exposed to the weather and wetness as the tarpaulin fabric of ‘977 is.

### ***Response to Arguments***

26. Applicant's arguments to the JP07-157977 rejections filed 11/25/2005 have been fully considered but they are not persuasive. Applicant has argued that ‘977 applies the agents in two

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steps rather than one. However, the fluoropolymer water repellent is applied in one step (see [0019]), not two. The second step applicant refers to is to coat the back surface with a mixed resin. This step is for an entirely different purpose, and is quite separate from applying the fluoropolymer for water-proofing. The applicant has also argued that '977 coats rather than saturates the fabric. The examiner disagrees. '977 reports immersing the fabric in the fluoropolymer [0019], [0013], thusly inherently saturating the fabric.

### *Conclusion*

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ERMA CAMERON  
PRIMARY EXAMINER

Erma Cameron  
Primary Examiner  
Art Unit 1762

December 27, 2005